T03D06 – Topic 03 Review

1. Table 6 of the Data Booklet lists melting points of the elements. Explain the trend in the melting points of the alkali metals, halogens and period 3 elements.

(Total 8 marks)

2. (a) (i) State the meaning of the term *electronegativity* and explain why the noble gases are not assigned electronegativity values.

(2)

(ii) State and explain the trend in electronegativity across period 3 from Na to Cl.

(2)

iii) Explain why Cl_2 rather than Br_2 would react more vigorously with a solution of I^-.

(2)

(b) State the acid-base properties of the following period 3 oxides.

MgO Al_2O_3 P_4O_6

Write equations to demonstrate the acid-base properties of each compound.

(7)

(Total 13 marks)

3. (a) State the meaning of the term *electronegativity*.

(1)

(b) State and explain the trend in electronegativity across period 3 from Na to Cl.

(2)

(c) Explain why Cl_2 rather than Br_2 would react more vigorously with a solution of I^-.

(2)

(Total 5 marks)